

REMARKS/ARGUMENTS

Applicants wish to thank the Examiner for his time in conducting a telephonic interview with the Applicants' counsel on May 21, 2007. As indicated by the Examiner's Interview Summary dated May 22, 2007, the substance of the interview included a discussion of proposed claim amendments, which are being filed in this Reply in response to the Office Action dated February 8, 2007, and the Applicants understanding of U.S. Patent No. 1,619,490 to Schwarz ("Schwarz"). In particular, as discussed in detail below, Applicants' counsel noted that the tamper technology used in Schwarz would not be able to provide the tile shapes recited in the claims as amended.

In the outstanding Office Action dated February 8, 2007, Claims 28-30 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In addition, Claims 13 and 17 were rejected as obvious under 35 U.S.C. §103(a) in light of U.S. Patent No. 1,619,490 to Schwarz ("Schwarz") in view of U.S. Patent No. 2,120,742 to Grundy ("Grundy") and U.S. Patent No. 5,711,126 to Wells ("Wells"). Furthermore, Claims 15, 16, 19, 26, 27, and 28 were rejected as obvious under §103(a) in light of Schwarz, Claims 21 and 22 were rejected as obvious under §103(a) in light of Schwarz in view of Wells, Claims 23-25 were rejected as obvious under §103(a) in light of Schwarz in view of Wells and further in view of Grundy, and Claims 29-30 were rejected as obvious under §103(a) in light of Schwarz in view of Grundy.

In response to the outstanding Office Action, Applicants have amended independent Claims 13, 15, 16, 19, and 28 and dependent Claims 20, 24, 25, and 30. In addition, Claims 1-12, 14, and 18 were previously canceled, and Claim 31 has been added. Following this amendment, Claims 13, 15-17, and 19-31 remain pending in this application.

Response to Rejection of Claims 28-30 under 35 U.S.C. §112, second paragraph

In response to the rejection of Claims 28-30 under §112, second paragraph, Applicants have amended independent Claim 28 to remove the reference to the "second tile shape."

Response to Rejection of Claims 13, 15-17, and 19-30 under 35 U.S.C. §103(a)

Independent Claim 13

In response to the rejection of independent Claim 13 under §103(a), Applicants have amended independent Claim 13 to recite that the first breakage channel lies within a plane that is skewed relative to a vertical plane that includes the gravitational axis of the second tile shape. Schwarz, the primary reference cited in the outstanding Office Action, discloses a machine for making tile that utilizes a mold and a tamper to form the shape of the tile. See Schwarz, page 1, column 2, lines 79-82. The tamper has an “up and down and longitudinal movement to tamp the concrete into the molds and also shape the upper surface of the tile.” Id., page 1, column 2, lines 86-89. Thus, Schwarz discloses using a press mold type arrangement for forming the surfaces of the tiles. In addition, the tiles formed in Schwarz are formed two tiles wide and are broken apart along a groove that is formed between the two tiles by a downwardly extending rib 34 of the tamper. Id., page 2, column 1, lines 41-49. Thus, the groove in the tiles formed in Schwarz lies in a vertical plane that includes the gravitational axis of the tiles.

Applicants respectfully assert that the method recited in independent Claim 13 would not be obvious in light of Schwarz because the first breakage channel recited in independent Claim 13 as amended cannot be formed using the press mold technology disclosed by Schwarz. In particular, a vertically oriented tamper cannot be used to form a channel that lies within a plane that is skewed relative to a vertical plane that includes the gravitational axis of the tile.

In addition, Applicants have amended independent Claim 13 to recite that the first and second tile shapes provided each have a single, generally “S”-shaped transverse cross section. As noted above, Schwarz discloses forming two Spanish tiles together and breaking the Spanish tiles apart along a groove that is formed between the two tiles by a downwardly extending rib of the tamper. Furthermore, after breaking the two Spanish tiles of Schwarz apart along the tamper-formed groove, the two resulting tiles do not include a pan portion having a generally “C”-shaped transverse cross section, which is recited in independent Claim 13. See Schwartz, Figure 7. Accordingly, Applicants respectfully assert that independent Claim 13 as amended is patentable in light of the prior art and request that the rejection of Claim 13 be withdrawn.

Independent Claims 15, 16, 19, and 28

Similarly, Applicants have amended independent Claim 15 to recite that the separation channel lies along a plane that is skewed relative to a vertical plane that includes the gravitational axis of the second tile shape, independent Claim 16 to recite that the simulation interface channel lies within a plane that is skewed relative to a vertical plane that includes the gravitational axis of the second tile shape, independent Claim 19 to recite that the breakage channel lies within a plane that is skewed relative to a vertical plane that includes the gravitational axis of the second tile shape, and independent Claim 28 to recite that the at least one breakage channel lies within a plane that is skewed relative to a vertical plane that includes the gravitational axis of the second tile shape. For the reasons discussed above in relation to independent Claim 13, Applicants respectfully assert that independent Claims 15, 16, 19, and 28 are patentable in light of the prior art and respectfully request that the rejection of Claims 15, 16, 19, and 28 be withdrawn.

Furthermore, Applicants have amended independent Claims 15 and 16 to recite that the first and second tile shapes provided are each a single, generally S-tile shape, independent Claim 19 to recite that the first and second tile shapes provided each have a single, generally “S”-shaped transverse cross section, and independent Claim 28 to recite that the tile shape provided has a single, generally “S”-shaped transverse cross section. As noted above, Schwarz discloses forming two Spanish tiles together and breaking the two Spanish tiles apart along a groove that is formed between the two tiles by a downwardly extending rib of the tamper. For this additional reason, Applicants respectfully assert that independent Claims 15, 16, 19, and 28 as amended are patentable in light of the prior art and request that the rejection of these claims be withdrawn.

In addition, after breaking the two Spanish tiles of Schwartz apart along the tamper-formed groove, the two resulting tiles do not include a pan portion having a generally “C”-shaped transverse cross section, which is recited in independent Claims 16. For this additional reason, Applicants respectfully assert that independent Claim 16 is patentable in light of the prior art and request that the rejection of Claim 16 be withdrawn.

In addition, dependent Claim 17 depends from independent Claim 13 and incorporates all of the limitations of Claim 13, dependent Claims 20-27 depend from independent Claim 19 and incorporate all of the limitations of Claim 19, and dependent Claims 29-30 depend from

independent Claim 28 and incorporate all of the limitations of Claim 28. Thus, for the reasons discussed above with respect to independent Claims 13, 19, and 28, Applicants respectfully assert that dependent Claims 17, 20-27, and 28-30 are patentable in light of the prior art and respectfully request that the rejection of Claims 17, 20-27, and 29-30 be withdrawn.

New Independent Claim 31

New independent Claim 31 recites a method of providing a roof structure that includes the steps of providing a tile shape having a generally "S"-shaped transverse cross section and that defines at least one breakage channel on one or more surfaces of said tile shape. The at least one breakage channel lies vertically below an overhang portion of a cap portion of the tile shape, and the overhang portion lies intermediate the at least one breakage channel and an apex of the cap portion. The at least one breakage channel is configured to facilitate breakage of the tile shape between the cap portion and the pan portion. Applicants respectfully assert that this claim is patentable over Schwartz because the method cannot be performed by the tamper disclosed in Schwartz, and the method is not disclosed by other cited prior art.

Conclusion

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Appl. No.: 10/656,893
Amdt. dated June 7, 2007
Reply to Office Action of February 8, 2007

Applicants appreciate the Examiner's careful consideration of this application and would welcome a telephone conference with the Examiner to expedite the processing of the patent application. Applicant's attorney, Meredith Struby, may be reached directly at (404) 881-4626.

Respectfully submitted,

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ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON JUNE 7, 2007.